

# Anagrafica web

1.0.0

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# Chapter 1

## README

This README would normally document whatever steps are necessary to get your application up and running.

### What is this repository for?

- Quick summary
- Version
- [Learn Markdown](#)

### How do I get set up?

- Summary of set up
- Configuration
- Dependencies
- Database configuration
- How to run tests
- Deployment instructions

### Contribution guidelines

- Writing tests
- Code review
- Other guidelines

### Who do I talk to?

- Repo owner or admin
- Other community or team contact



## Chapter 2

# Namespace Index

### 2.1 Namespace List

Here is a list of all documented namespaces with brief descriptions:

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## Chapter 3

# Class Index

### 3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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## Chapter 4

# Namespace Documentation

### 4.1 JAMA Namespace Reference

#### 4.1.1 Detailed Description

Cholesky decomposition class

For a symmetric, positive definite matrix  $A$ , the Cholesky decomposition is an lower triangular matrix  $L$  so that  $A = L * L'$ .

If the matrix is not symmetric or positive definite, the constructor returns a partial decomposition and sets an internal flag that may be queried by the `isSPD()` method.

##### Author

Paul Meagher  
Michael Bommarito

##### Version

1.2

Class to obtain eigenvalues and eigenvectors of a real matrix.

If  $A$  is symmetric, then  $A = V * D * V'$  where the eigenvalue matrix  $D$  is diagonal and the eigenvector matrix  $V$  is orthogonal (i.e.  $A = V * \text{times}(D, \text{times}(V, \text{transpose}()))$  and  $V * \text{times}(V, \text{transpose}())$  equals the identity matrix).

If  $A$  is not symmetric, then the eigenvalue matrix  $D$  is block diagonal with the real eigenvalues in 1-by-1 blocks and any complex eigenvalues,  $\lambda + i\mu$ , in 2-by-2 blocks,  $[\lambda, \mu; -\mu, \lambda]$ . The columns of  $V$  represent the eigenvectors in the sense that  $A * V = V * D$ , i.e.  $A * \text{times}(V)$  equals  $V * \text{times}(D)$ . The matrix  $V$  may be badly conditioned, or even singular, so the validity of the equation  $A = V * D * \text{inverse}(V)$  depends upon  $V.\text{cond}()$ .

##### Author

Paul Meagher PHP v3.0

**Version**

1.1

For an m-by-n matrix A with  $m \geq n$ , the LU decomposition is an m-by-n unit lower triangular matrix L, an n-by-n upper triangular matrix U, and a permutation vector piv of length m so that  $A(\text{piv},:) = L*U$ . If  $m < n$ , then L is m-by-m and U is m-by-n.

The LU decomposition with pivoting always exists, even if the matrix is singular, so the constructor will never fail. The primary use of the LU decomposition is in the solution of square systems of simultaneous linear equations. This will fail if `isNonsingular()` returns false.

**Author**

Paul Meagher  
Bartosz Matosiuk  
Michael Bommarito

**Version**

1.1 PHP v3.0

For an m-by-n matrix A with  $m \geq n$ , the QR decomposition is an m-by-n orthogonal matrix Q and an n-by-n upper triangular matrix R so that  $A = Q*R$ .

The QR decomposition always exists, even if the matrix does not have full rank, so the constructor will never fail. The primary use of the QR decomposition is in the least squares solution of nonsquare systems of simultaneous linear equations. This will fail if `isFullRank()` returns false.

**Author**

Paul Meagher PHP v3.0

**Version**

1.1

For an m-by-n matrix A with  $m \geq n$ , the singular value decomposition is an m-by-n orthogonal matrix U, an n-by-n diagonal matrix S, and an n-by-n orthogonal matrix V so that  $A = U*S*V'$ .

The singular values,  $\text{sigma}[\$k] = S[\$k][\$k]$ , are ordered so that  $\text{sigma}[0] \geq \text{sigma}[1] \geq \dots \geq \text{sigma}[n-1]$ .

The singular value decomposition always exists, so the constructor will never fail. The matrix condition number and the effective numerical rank can be computed from this decomposition.

**Author**

Paul Meagher PHP v3.0

**Version**

1.1

**Error handling****Author**

Michael Bommarito

**Version**

01292005

**Pythagorean Theorem:**

$$a = 3 \quad b = 4 \quad r = \sqrt{\text{square}(a) + \text{square}(b)} \quad r = 5$$

$$r = \sqrt{a^2 + b^2} \text{ without under/overflow.}$$



## 4.2 PHPEXcel Namespace Reference

### 4.2.1 Detailed Description

#### Copyright

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#### Version

1.7.9, 2013-06-02

#### Copyright

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## 4.3 PHPEXcel\_CachedObjectStorage Namespace Reference

### 4.3.1 Detailed Description

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## 4.4 PHPEXcel\_Calculation Namespace Reference

### 4.4.1 Detailed Description

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## 4.5 PHPExcel\_Cell Namespace Reference

### 4.5.1 Detailed Description

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#### Copyright

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## 4.6 PHPExcel\_Chart Namespace Reference

### 4.6.1 Detailed Description

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#### Copyright

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## 4.7 PHPExcel\_Chart\_Renderer Namespace Reference

### 4.7.1 Detailed Description

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## 4.8 PHPExcel\_Reader Namespace Reference

### 4.8.1 Detailed Description

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#### Version

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#### Copyright

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## 4.9 PHPExcel\_Reader\_Excel2007 Namespace Reference

### 4.9.1 Detailed Description

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#### Copyright

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## 4.10 PHPExcel\_Reader\_Excel5 Namespace Reference

### 4.10.1 Detailed Description

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## 4.11 PHPExcel\_RichText Namespace Reference

### 4.11.1 Detailed Description

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## 4.12 PHPExcel\_Settings Namespace Reference

### 4.12.1 Detailed Description

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#### Version

1.7.9, 2013-06-02

## 4.13 PHPExcel\_Shared Namespace Reference

### 4.13.1 Detailed Description

#### Copyright

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## 4.14 PHPExcel\_Shared\_Escher Namespace Reference

### 4.14.1 Detailed Description

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## 4.15 PHPExcel\_Shared\_OLE Namespace Reference

### 4.15.1 Detailed Description

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#### Version

1.7.9, 2013-06-02

## 4.16 PHPExcel\_Shared\_Trend Namespace Reference

### 4.16.1 Detailed Description

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## 4.17 PHPExcel\_Shared\_ZipArchive Namespace Reference

### 4.17.1 Detailed Description

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## 4.18 PHPExcel\_Style Namespace Reference

### 4.18.1 Detailed Description

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#### Version

1.4.5, 2007-08-23

## 4.19 PHPExcel\_Worksheet Namespace Reference

### 4.19.1 Detailed Description

#### Copyright

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#### Copyright

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## 4.20 PHPExcel\_Worksheet\_Drawing Namespace Reference

### 4.20.1 Detailed Description

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## 4.21 PHPExcel\_Writer Namespace Reference

### 4.21.1 Detailed Description

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## 4.22 PHPExcel\_Writer\_2007 Namespace Reference

### 4.22.1 Detailed Description

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## 4.23 PHPExcel\_Writer\_CSV Namespace Reference

### 4.23.1 Detailed Description

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## 4.24 PHPExcel\_Writer\_Excel2007 Namespace Reference

### 4.24.1 Detailed Description

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## 4.25 PHPExcel\_Writer\_Excel5 Namespace Reference

### 4.25.1 Detailed Description

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## 4.26 PHPExcel\_Writer\_HTML Namespace Reference

### 4.26.1 Detailed Description

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## 4.27 PHPExcel\_Writer\_PDF Namespace Reference

### 4.27.1 Detailed Description

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## Chapter 5

# Class Documentation

### 5.1 DBConnection Class Reference

#### Public Member Functions

- [close\(\)](#)
- [getConnectionObject\(\)](#)

#### 5.1.1 Detailed Description

Class [DBConnection](#)

Connessione con il Database (tramite PDO)

#### 5.1.2 Member Function Documentation

##### 5.1.2.1 close()

```
DBConnection::close ( )
```

Chiude la connessione aperta

##### 5.1.2.2 getConnectionObject()

```
DBConnection::getConnectionObject ( )
```

Ritorna la connessione aperta

#### Returns

{PDO} database resource object or NULL if there was an error

The documentation for this class was generated from the following file:

- `resources/php/librerie/DBConnection.php`

## 5.2 DBInterface Class Reference

### Public Member Functions

- [executeQuery](#) (\$sql, \$returnResult=true)
- [select](#) (\$conditions=array(), \$orderBy=null, \$columns='\*')
- [insert](#) (\$values)
- [update](#) (\$values, \$conditions)
- [delete](#) (\$conditions)

### 5.2.1 Detailed Description

Class DBQuery

Interfaccia principale alle entità del DataBase

### 5.2.2 Member Function Documentation

#### 5.2.2.1 delete()

```
DBInterface::delete (
    $conditions )
```

Interfaccia principale alla query di DELETE

#### Parameters

<i>\$conditions</i>	
---------------------	--

#### Returns

mixed

#### 5.2.2.2 executeQuery()

```
DBInterface::executeQuery (
    $sql,
    $returnResult = true )
```

Interfaccia per esecuzione di query SQL già pronte

## Parameters

	<i>\$sql</i>	
bool	<i>\$returnResult</i>	

## Returns

mixed

## 5.2.2.3 insert()

```
DBInterface::insert (
    $values )
```

Interfaccia principale alla query di INSERT

## Parameters

<i>\$values</i>	
-----------------	--

## Returns

mixed

## 5.2.2.4 select()

```
DBInterface::select (
    $conditions = array(),
    $orderBy = null,
    $columns = '*' )
```

Interfaccia principale alla query di SELECT

## Parameters

array	<i>\$conditions</i>	
null	<i>\$orderBy</i>	
string	<i>\$columns</i>	

## Returns

mixed

### 5.2.2.5 update()

```
DBInterface::update (
    $values,
    $conditions )
```

Interfaccia principale alla query di UPDATE

#### Parameters

<i>\$values</i>	
<i>\$conditions</i>	

#### Returns

mixed

The documentation for this class was generated from the following file:

- resources/php/librerie/DBInterface.php

## 5.3 if Category Reference

### 5.3.1 Detailed Description

PHPExcel root directory PHPExcel\_Calculation\_Database

PHPExcel root directory PHPExcel\_Calculation\_DateTime

PHPExcel root directory PHPExcel\_Calculation\_Logical

PHPExcel root directory PHPExcel\_Calculation\_LookupRef

PHPExcel root directory PHPExcel\_Calculation\_MathTrig

PHPExcel root directory PHPExcel\_Calculation\_TextData

PHPExcel root directory PHPExcel\_Calculation (Multiton)

PHPExcel root directory PHPExcel\_Cell\_AdvancedValueBinder

PHPExcel root directory PHPExcel\_Cell\_DefaultValueBinder

PHPExcel root directory PHPExcel\_IOFactory

PHPExcel root directory PHPExcel\_Reader\_CSV

PHPExcel root directory PHPExcel\_Reader\_DefaultReadFilter

PHPExcel root directory PHPExcel\_Reader\_Excel2003XML

PHPExcel root directory PHPExcel\_Reader\_Excel2007

PHPEXcel root directory PHPEXcel\_Reader\_Excel5

This class uses <http://sourceforge.net/projects/phpexcelreader/parseXL>

PHPEXcel root directory PHPEXcel\_Reader\_Gnumeric

PHPEXcel root directory PHPEXcel\_Reader\_HTML

PHPEXcel root directory PHPEXcel\_Reader\_OOCalc

PHPEXcel root directory PHPEXcel\_Reader\_SYLK

PHPEXcel\_Shared\_XMLWriter

PHPEXcel root directory PHPEXcel

The documentation for this category was generated from the following file:

- [resources/external/PHPEXcel\\_1.7.9/Classes/PHPEXcel/Calculation/Database.php](#)

## 5.4 PHPEXcel\_Settings Class Reference

### Static Public Member Functions

- static [setZipClass](#) (\$zipClass)
- static [getZipClass](#) ()
- static [getCacheStorageMethod](#) ()
- static [getCacheStorageClass](#) ()
- static [setCacheStorageMethod](#) ( \$method=PHPEXcel\_CachedObjectStorageFactory::cache\_in\_memory, \$arguments=array())
- static [setLocale](#) (\$locale='en\_us')
- static [setChartRenderer](#) (\$libraryName, \$libraryBaseDir)
- static [setChartRendererName](#) (\$libraryName)
- static [setChartRendererPath](#) (\$libraryBaseDir)
- static [getChartRendererName](#) ()
- static [getChartRendererPath](#) ()
- static [setPdfRenderer](#) (\$libraryName, \$libraryBaseDir)
- static [setPdfRendererName](#) (\$libraryName)
- static [setPdfRendererPath](#) (\$libraryBaseDir)
- static [getPdfRendererName](#) ()
- static [getPdfRendererPath](#) ()

### Public Attributes

- const [PCLZIP](#) = 'PHPEXcel\_Shared\_ZipArchive'
- const [CHART\\_RENDERERER\\_JPGGRAPH](#) = 'jpggraph'
- const [PDF\\_RENDERERER\\_TCPDF](#) = 'tcpdf'

#### 5.4.1 Detailed Description

PHPEXcel root directory

## 5.4.2 Member Function Documentation

### 5.4.2.1 `getCacheStorageClass()`

```
static PHPExcel_Settings::getCacheStorageClass ( ) [static]
```

Return the name of the class that is currently being used for cell cacheing

#### Returns

string Name of the class currently being used for cacheing

### 5.4.2.2 `getCacheStorageMethod()`

```
static PHPExcel_Settings::getCacheStorageMethod ( ) [static]
```

Return the name of the method that is currently configured for cell cacheing

#### Returns

string Name of the cacheing method

### 5.4.2.3 `getChartRendererName()`

```
static PHPExcel_Settings::getChartRendererName ( ) [static]
```

Return the Chart Rendering Library that PHPExcel is currently configured to use (e.g. jgraph)

#### Returns

string|NULL Internal reference name of the Chart Rendering Library that PHPExcel is currently configured to use e.g. [PHPExcel\\_Settings::CHART\\_RENDERER\\_JPGGRAPH](#)

### 5.4.2.4 `getChartRendererPath()`

```
static PHPExcel_Settings::getChartRendererPath ( ) [static]
```

Return the directory path to the Chart Rendering Library that PHPExcel is currently configured to use

#### Returns

string|NULL Directory Path to the Chart Rendering Library that PHPExcel is currently configured to use



#### 5.4.2.5 getPdfRendererName()

```
static PHPEXcel_Settings::getPdfRendererName ( ) [static]
```

Return the PDF Rendering Library that PHPEXcel is currently configured to use (e.g. dompdf)

##### Returns

string|NULL Internal reference name of the PDF Rendering Library that PHPEXcel is currently configured to use e.g. [PHPEXcel\\_Settings::PDF\\_RENDERER\\_TCPDF](#), `PHPEXcel_Settings::PDF_RENDERER_DOMPDF` or `PHPEXcel_Settings::PDF_RENDERER_MPDF`

#### 5.4.2.6 getPdfRendererPath()

```
static PHPEXcel_Settings::getPdfRendererPath ( ) [static]
```

Return the directory path to the PDF Rendering Library that PHPEXcel is currently configured to use

##### Returns

string|NULL Directory Path to the PDF Rendering Library that PHPEXcel is currently configured to use

#### 5.4.2.7 getZipClass()

```
static PHPEXcel_Settings::getZipClass ( ) [static]
```

Return the name of the Zip handler Class that PHPEXcel is configured to use (PCLZip or ZipArchive) or Zip file management

##### Returns

string Name of the Zip handler Class that PHPEXcel is configured to use for Zip file management e.g. `PHPEXcel_Settings::PCLZip` or `PHPEXcel_Settings::ZipArchive`

#### 5.4.2.8 setCacheStorageMethod()

```
static PHPEXcel_Settings::setCacheStorageMethod (
    $method = PHPEXcel_CachedObjectStorageFactory::cache_in_memory,
    $arguments = array() ) [static]
```

Set the method that should be used for cell cacheing

**Parameters**

string	<i>\$method</i>	Name of the cacheing method
array	<i>\$arguments</i>	Optional configuration arguments for the cacheing method

**Returns**

boolean Success or failure

**5.4.2.9 setChartRenderer()**

```
static PHPExcel_Settings::setChartRenderer (
    $libraryName,
    $libraryBaseDir ) [static]
```

Set details of the external library that PHPExcel should use for rendering charts

**Parameters**

string	<i>\$libraryName</i>	Internal reference name of the library e.g. <a href="#">PHPExcel_Settings::CHART_RENDERER_JPGGRAPH</a>
string	<i>\$libraryBaseDir</i>	Directory path to the library's base folder

**Returns**

boolean Success or failure

**5.4.2.10 setChartRendererName()**

```
static PHPExcel_Settings::setChartRendererName (
    $libraryName ) [static]
```

Identify to PHPExcel the external library to use for rendering charts

**Parameters**

string	<i>\$libraryName</i>	Internal reference name of the library e.g. <a href="#">PHPExcel_Settings::CHART_RENDERER_JPGGRAPH</a>
--------	----------------------	---

**Returns**

boolean Success or failure

## 5.4.2.11 setChartRendererPath()

```
static PHPExcel_Settings::setChartRendererPath (
    $libraryBaseDir ) [static]
```

Tell PHPExcel where to find the external library to use for rendering charts

## Parameters

string	<i>\$libraryBaseDir</i>	Directory path to the library's base folder
--------	-------------------------	---

## Returns

boolean Success or failure

## 5.4.2.12 setLocale()

```
static PHPExcel_Settings::setLocale (
    $locale = 'en_us' ) [static]
```

Set the locale code to use for formula translations and any special formatting

## Parameters

string	<i>\$locale</i>	The locale code to use (e.g. "fr" or "pt_br" or "en_uk")
--------	-----------------	--

## Returns

boolean Success or failure

## 5.4.2.13 setPdfRenderer()

```
static PHPExcel_Settings::setPdfRenderer (
    $libraryName,
    $libraryBaseDir ) [static]
```

Set details of the external library that PHPExcel should use for rendering PDF files

## Parameters

string	<i>\$libraryName</i>	Internal reference name of the library e.g. <a href="#">PHPExcel_Settings::PDF_RENDERER_TCPDF</a> , <a href="#">PHPExcel_Settings::PDF_RENDERER_DOMPDF</a> or <a href="#">PHPExcel_Settings::PDF_RENDERER_MPDF</a>
string	<i>\$libraryBaseDir</i>	Directory path to the library's base folder

**Returns**

boolean Success or failure

**5.4.2.14 setPdfRendererName()**

```
static PHPExcel_Settings::setPdfRendererName (
    $libraryName ) [static]
```

Identify to PHPExcel the external library to use for rendering PDF files

**Parameters**

string	<i>\$libraryName</i>	Internal reference name of the library e.g. <a href="#">PHPExcel_Settings::PDF_RENDERER_TCPDF</a> , <a href="#">PHPExcel_Settings::PDF_RENDERER_DOMPDF</a> or <a href="#">PHPExcel_Settings::PDF_RENDERER_MPDF</a>
--------	----------------------	---

**Returns**

boolean Success or failure

**5.4.2.15 setPdfRendererPath()**

```
static PHPExcel_Settings::setPdfRendererPath (
    $libraryBaseDir ) [static]
```

Tell PHPExcel where to find the external library to use for rendering PDF files

**Parameters**

string	<i>\$libraryBaseDir</i>	Directory path to the library's base folder
--------	-------------------------	---

**Returns**

boolean Success or failure

**5.4.2.16 setZipClass()**

```
static PHPExcel_Settings::setZipClass (
    $zipClass ) [static]
```

Set the Zip handler Class that PHPExcel should use for Zip file management (PCLZip or ZipArchive)

## Parameters

string	<i>\$zipClass</i>	The Zip handler class that PHPEXcel should use for Zip file management e.g. PHPEXcel_Settings::PCLZip or PHPEXcel_Settings::ZipArchive
--------	-------------------	--

## Returns

boolean Success or failure

### 5.4.3 Member Data Documentation

#### 5.4.3.1 CHART\_RENDERER\_JPGGRAPH

```
const PHPEXcel_Settings::CHART_RENDERER_JPGGRAPH = 'jpggraph'
```

Optional Chart Rendering libraries

#### 5.4.3.2 PCLZIP

```
const PHPEXcel_Settings::PCLZIP = 'PHPEXcel_Shared_ZipArchive'
```

constants Available Zip library classes

#### 5.4.3.3 PDF\_RENDERER\_TCPDF

```
const PHPEXcel_Settings::PDF_RENDERER_TCPDF = 'tcpdf'
```

Optional PDF Rendering libraries

The documentation for this class was generated from the following file:

- resources/external/PHPEXcel\_1.7.9/Classes/PHPEXcel/Settings.php

## 5.5 PHPExcel\_Shared\_JAMA\_Matrix Class Reference

### Public Member Functions

- [\\_\\_construct](#) ()
- [getArray](#) ()
- [getRowDimension](#) ()
- [getColumnDimension](#) ()
- [get](#) (\$i=null, \$j=null)
- [getMatrix](#) ()
- [checkMatrixDimensions](#) (\$B=null)
- [set](#) (\$i=null, \$j=null, \$c=null)
- [identity](#) (\$m=null, \$n=null)
- [diagonal](#) (\$m=null, \$n=null, \$c=1)
- [getMatrixByRow](#) (\$i0=null, \$iF=null)
- [getMatrixByCol](#) (\$j0=null, \$jF=null)
- [transpose](#) ()
- [trace](#) ()
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- [arrayLeftDivideEquals](#) ()
- [times](#) ()
- [power](#) ()
- [concat](#) ()
- [solve](#) (\$B)
- [inverse](#) ()
- [det](#) ()

### 5.5.1 Detailed Description

PHPExcel root directory

### 5.5.2 Constructor & Destructor Documentation

#### 5.5.2.1 \_\_construct()

```
PHPExcel_Shared_JAMA_Matrix::__construct ( )
```

Polymorphic constructor

As PHP has no support for polymorphic constructors, we hack our own sort of polymorphism using `func_num_args`, `func_get_arg`, and `gettype`. In essence, we're just implementing a simple RTTI filter and calling the appropriate constructor.

### 5.5.3 Member Function Documentation

#### 5.5.3.1 arrayLeftDivide()

```
PHPExcel_Shared_JAMA_Matrix::arrayLeftDivide ( )
```

arrayLeftDivide

Element-by-element Left division  $A / B$

##### Parameters

Matrix	$B$	Matrix B
--------	-----	----------

##### Returns

Matrix Division result

#### 5.5.3.2 arrayLeftDivideEquals()

```
PHPExcel_Shared_JAMA_Matrix::arrayLeftDivideEquals ( )
```

arrayLeftDivideEquals

Element-by-element Left division  $A_{ij} = A_{ij} / B_{ij}$

##### Parameters

mixed	$B$	Matrix/Array
-------	-----	--------------

##### Returns

Matrix Matrix  $A_{ij}$

#### 5.5.3.3 arrayRightDivide()

```
PHPExcel_Shared_JAMA_Matrix::arrayRightDivide ( )
```

arrayRightDivide

Element-by-element right division  $A / B$

**Parameters**

Matrix	$B$	Matrix B
--------	-----	----------

**Returns**

Matrix Division result

**5.5.3.4 arrayRightDivideEquals()**

```
PHPExcel_Shared_JAMA_Matrix::arrayRightDivideEquals ( )
```

arrayRightDivideEquals

Element-by-element right division  $A_{ij} = A_{ij} / B_{ij}$

**Parameters**

mixed	$B$	Matrix/Array
-------	-----	--------------

**Returns**

Matrix Matrix  $A_{ij}$

**5.5.3.5 arrayTimes()**

```
PHPExcel_Shared_JAMA_Matrix::arrayTimes ( )
```

arrayTimes

Element-by-element multiplication  $C_{ij} = A_{ij} * B_{ij}$

**Parameters**

mixed	$B$	Matrix/Array
-------	-----	--------------

**Returns**

Matrix Matrix  $C_{ij}$



#### 5.5.3.6 arrayTimesEquals()

```
PHPExcel_Shared_JAMA_Matrix::arrayTimesEquals ( )
```

arrayTimesEquals

Element-by-element multiplication  $A_{ij} = A_{ij} * B_{ij}$

##### Parameters

mixed	<i>\$B</i>	Matrix/Array
-------	------------	--------------

##### Returns

Matrix Matrix Aij

#### 5.5.3.7 checkMatrixDimensions()

```
PHPExcel_Shared_JAMA_Matrix::checkMatrixDimensions (
    $B = null )
```

checkMatrixDimensions

Is matrix B the same size?

##### Parameters

Matrix	<i>\$B</i>	Matrix B
--------	------------	----------

##### Returns

boolean

#### 5.5.3.8 concat()

```
PHPExcel_Shared_JAMA_Matrix::concat ( )
```

concat

$A = A \& B$

##### Parameters

mixed	<i>\$B</i>	Matrix/Array
-------	------------	--------------

**Returns**

Matrix Sum

**5.5.3.9 det()**

```
PHPExcel_Shared_JAMA_Matrix::det ( )
```

**det**

Calculate determinant

**Returns**

float Determinant

**5.5.3.10 diagonal()**

```
PHPExcel_Shared_JAMA_Matrix::diagonal (
    $m = null,
    $n = null,
    $c = 1 )
```

**diagonal**

Generate a diagonal matrix

**Parameters**

int	<i>\$m</i>	Row dimension
int	<i>\$n</i>	Column dimension
mixed	<i>\$c</i>	Diagonal value

**Returns**

Matrix Diagonal matrix

**5.5.3.11 get()**

```
PHPExcel_Shared_JAMA_Matrix::get (
    $i = null,
    $j = null )
```

**get**

Get the i,j-th element of the matrix.

**Parameters**

int	<i>\$i</i>	Row position
int	<i>\$j</i>	Column position

**Returns**

mixed Element (int/float/double)

**5.5.3.12 `getArray()`**

```
PHPExcel_Shared_JAMA_Matrix::getArray ( )
```

`getArray`

**Returns**

array Matrix array

**5.5.3.13 `getColumnDimension()`**

```
PHPExcel_Shared_JAMA_Matrix::getColumnDimension ( )
```

`getColumnDimension`

**Returns**

int Column dimension

**5.5.3.14 `getMatrix()`**

```
PHPExcel_Shared_JAMA_Matrix::getMatrix ( )
```

`getMatrix`

Get a submatrix

**Parameters**

int	<i>\$iO</i>	Initial row index
int	<i>\$iF</i>	Final row index
int	<i>\$jO</i>	Initial column index
int	<i>\$jF</i>	Final column index

**Returns**

Matrix Submatrix

**5.5.3.15 getMatrixByCol()**

```
PHPExcel_Shared_JAMA_Matrix::getMatrixByCol (
    $j0 = null,
    $jF = null )
```

**getMatrixByCol**

Get a submatrix by column index/range

**Parameters**

int	<i>\$i0</i>	Initial column index
int	<i>\$iF</i>	Final column index

**Returns**

Matrix Submatrix

**5.5.3.16 getMatrixByRow()**

```
PHPExcel_Shared_JAMA_Matrix::getMatrixByRow (
    $i0 = null,
    $iF = null )
```

**getMatrixByRow**

Get a submatrix by row index/range

**Parameters**

int	<i>\$i0</i>	Initial row index
int	<i>\$iF</i>	Final row index

**Returns**

Matrix Submatrix

**5.5.3.17** `getRowDimension()`

```
PHPExcel_Shared_JAMA_Matrix::getRowDimension ( )
```

`getRowDimension`

**Returns**

int Row dimension

**5.5.3.18** `identity()`

```
PHPExcel_Shared_JAMA_Matrix::identity (
    $m = null,
    $n = null )
```

`identity`

Generate an identity matrix.

**Parameters**

int	<i>\$m</i>	Row dimension
int	<i>\$n</i>	Column dimension

**Returns**

Matrix Identity matrix

**5.5.3.19** `inverse()`

```
PHPExcel_Shared_JAMA_Matrix::inverse ( )
```

Matrix inverse or pseudoinverse.

**Returns**

Matrix ... Inverse(A) if A is square, pseudoinverse otherwise.

**5.5.3.20** `minus()`

```
PHPExcel_Shared_JAMA_Matrix::minus ( )
```

`minus`

A - B

**Parameters**

mixed	$\$B$	Matrix/Array
-------	-------	--------------

**Returns**

Matrix Sum

**5.5.3.21 minusEquals()**

```
PHPExcel_Shared_JAMA_Matrix::minusEquals ( )
```

minusEquals

$A = A - B$

**Parameters**

mixed	$\$B$	Matrix/Array
-------	-------	--------------

**Returns**

Matrix Sum

**5.5.3.22 plus()**

```
PHPExcel_Shared_JAMA_Matrix::plus ( )
```

plus

$A + B$

**Parameters**

mixed	$\$B$	Matrix/Array
-------	-------	--------------

**Returns**

Matrix Sum

## 5.5.3.23 plusEquals()

```
PHPExcel_Shared_JAMA_Matrix::plusEquals ( )
```

plusEquals

$A = A + B$

Parameters

mixed	<i>\$B</i>	Matrix/Array
-------	------------	--------------

Returns

Matrix Sum

## 5.5.3.24 power()

```
PHPExcel_Shared_JAMA_Matrix::power ( )
```

power

$A = A ^ B$

Parameters

mixed	<i>\$B</i>	Matrix/Array
-------	------------	--------------

Returns

Matrix Sum

## 5.5.3.25 set()

```
PHPExcel_Shared_JAMA_Matrix::set (
    $i = null,
    $j = null,
    $c = null )
```

set

Set the i,j-th element of the matrix.

Parameters

int	<i>\$i</i>	Row position
int	<i>\$j</i>	Column position
mixed	<i>\$c</i>	Int/float/double value

**Returns**

mixed Element (int/float/double)

**5.5.3.26 solve()**

```
PHPExcel_Shared_JAMA_Matrix::solve (
    $B )
```

Solve  $A \cdot X = B$ .

**Parameters**

Matrix	<i>\$B</i>	Right hand side
--------	------------	-----------------

**Returns**

Matrix ... Solution if A is square, least squares solution otherwise

**5.5.3.27 times()**

```
PHPExcel_Shared_JAMA_Matrix::times ( )
```

times

Matrix multiplication

**Parameters**

mixed	<i>\$n</i>	Matrix/Array/Scalar
-------	------------	---------------------

**Returns**

Matrix Product

**5.5.3.28 trace()**

```
PHPExcel_Shared_JAMA_Matrix::trace ( )
```

trace

Sum of diagonal elements

**Returns**

float Sum of diagonal elements



### 5.5.3.29 transpose()

```
PHPExcel_Shared_JAMA_Matrix::transpose ( )
```

transpose

Tranpose matrix

#### Returns

Matrix Transposed matrix

### 5.5.3.30 uminus()

```
PHPExcel_Shared_JAMA_Matrix::uminus ( )
```

uminus

Unary minus matrix -A

#### Returns

Matrix Unary minus matrix

The documentation for this class was generated from the following file:

- resources/external/PHPExcel\_1.7.9/Classes/PHPExcel/Shared/JAMA/Matrix.php



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